

Welcome to



**Kempenfelt Conference Centre
Barrie, Ontario**

August 17th – 21st, 2009
and beyond...

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Goals for GAINS Math CAMPPP 2009

Participants leave CAMPPP knowing that:

- It is important to be conscious and explicit about the instructional decisions you make so that all students develop deeper understanding of the big ideas of mathematics, and their connection to the real world.

Big Ideas

- Algebraic reasoning is a process of describing and analyzing (e.g., predicting) generalized mathematical relationships and change using words and symbols
- Comparing mathematical relationships helps us see that there are classes of relationships and provides insight into each member of the class.
- Different representations of relationships (e.g., numeric, graphic, geometric, algebraic, verbal, concrete/pictorial) highlight different characteristics or behaviours, and can serve different purposes.
- Limited information about a mathematical relationship can sometimes, but not always, allow us to predict other information about that relationship.

Engaging all students

- One way to engage all students is to differentiate instruction by posing parallel and open questions in all 3 parts of a 3-part lesson.

Participants practice the following in a safe environment:

- Posing parallel and open question
- Posing scaffolding questions
- Articulating big ideas in words appropriate for their grade band
- Working collaboratively with colleagues and engaging in critical discourse in a math learning community

Participants leave CAMPPP believing that:

- Their students will be more successful once they implement CAMPPP concepts and skills
- They would be wise to continue working collaboratively on CAMPPP concepts and skills

Notes



Notes



Schedule of Events – Monday August 17th

12:00pm – 1:00 pm	Lunch
1:00pm – 1:30pm	Welcome
1:30 pm - 2:45 pm	Introduction to Big Ideas, Differentiating Instruction through Questioning
2:45 pm – 3:00 pm	Break
3:00 pm – 4:00 pm	Introduction to Big Ideas, Differentiating Instruction through Questioning
4:00 pm – 6:00 pm	Networking Time
6:00 pm – 7:00 pm	Dinner
7:00pm – 8:30 pm	Focused Breakout Session

Schedule of Events – Tuesday August 18th

7:30 am – 8:30am	Breakfast
8:30 am – 10:30 am	Big Ideas, Differentiating Instruction through Questioning
10:30 am – 10:45 am	Break
10:45 am – 12:00pm	Focused Breakout Session
12:00 pm – 1:00 pm	Lunch
1:00 pm – 3:00 pm	Focused Breakout Session
3:00 pm – 3:15 pm	Break
3:15 pm – 4:45 pm	Focused Conversation with Critical Friends
4:45 pm – 6:00 pm	Networking Time
6:00 pm – 7:00 pm	Dinner

Schedule of Events – Wednesday August 19th

7:30 am – 8:30am	Breakfast
8:30 am – 10:30 am	Big Ideas, Differentiating Instruction through Questioning
10:30 am – 10:45 am	Break
10:45 am – 12:00pm	Focused Breakout Session
12:00 pm – 1:00 pm	Lunch
1:00 pm – 3:00 pm	Focused Breakout Session
3:00 pm – 3:15 pm	Break
3:15 pm – 6:00 pm	Networking Time
6:00 pm – 7:00 pm	Dinner
7:00 pm – 8:30 pm	Focused Conversation with Critical Friends

CAMPPP 2009 Contacts

Schedule of Events – Thursday August 20th

7:30 am – 8:30am	Breakfast
8:30 am – 10:30 am	Big Ideas, Differentiating Instruction through Questioning
10:30 am – 10:45 am	Break
10:45 am – 12:00pm	Focused Breakout Session
12:00 pm – 1:00 pm	Lunch
1:00 pm – 3:00 pm	Focused Breakout Session
3:00 pm – 3:15 pm	Break
3:15 pm – 4:45 pm	Focused Conversation with Critical Friends
4:45 pm – 6:00 pm	Networking Time
6:00 pm – 7:00 pm	Dinner

CAMPPP 2009 Contacts

Schedule of Events – Friday August 21st

7:30 am – 8:30am	Breakfast
8:30 am – 10:00 am	Big Ideas, Differentiating Instruction through Questioning
10:00 am – 10:15 am	Break
10:15 am – 11:00 am	Focused Conversation with Critical Friends (Reflection on the Experience)
11:00 am – 12:00 pm	Wrap-Up Plenary
12:00pm – 1:00pm	Lunch (brown bagged)

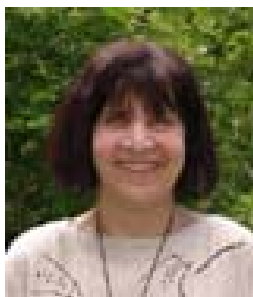


Plenary Session

What Really Matters: Focusing on the Important Math for EVERY Student

These plenary sessions will:

- introduce a set of big ideas to ground our Grade 7-12 work in patterns and algebra,
- provide opportunities for participants to explore how using big ideas can make our lesson goals and our questioning more precise and more meaningful, and
- provide a safe environment in which participants can experiment to see how open and parallel questions will support differentiated instruction in patterns and algebra.



Dr. Marian Small



Useful Resources



<http://www.edugains.ca/>

<http://www.edugains.ca/newsite/math/tips.htm>

<http://www.edugains.ca/newsite/math/clips.htm>



<http://gains-camp.wikispaces.com/>



O.A.M.E.

Ontario Association for
Mathematics Education

<http://www.oame.on.ca>

Focused Conversations with Critical Friends

Facilitators



John Rodgers



Silvana Simone



Anne Yeager



David Zimmer

Plenary Speaker Biography

Dr. Marian Small is the former Dean of Education at the University of New Brunswick (UNB). A former teacher, she was been a professor and director of the UNB Math Centre for many years and is a regular speaker on K-12 mathematics throughout Canada and the US. The focus of Dr. Small's professional work has been the development of curriculum and text materials for students of mathematics and professional materials for teachers. She has been an author on six text series at both elementary and secondary levels in Canada, the US, and Australia, and a senior author on four of those series. She has also served on the author team for the National Council of Teachers of Mathematics *Navigation Series*, Pre-K-2 and as the NCTM representative on the *Mathcounts* committee for middle school mathematics competitions throughout the US for four years. She authored *Making Math Meaningful for Canadian Students* to provide a comprehensive reference for mathematics teachers; she has written Big Ideas from Dr. Small for K-3 and for Grades 4-8 and is currently writing a similar book for Grades 9-12. She is a member of the NCTM 2011 yearbook on Motivation and Disposition.

Dr. Marian Small led a large-scale, three-year study on how students learn math developmentally. Through this study involving 12 000 students across Canada, Dr. Small identified what differentiates the level of mathematical sophistication of different students in the same classroom and what strategies can be used to approach those different levels effectively. She recently wrote a book for K-8 teachers focusing on differentiated instruction through better questioning published by NCTM as well as Teachers College Press and Nelson and is writing a similar book for Grades 6-12 for these publishers at this time.

Focused Breakout Sessions

Linear Growing Patterns, Grades 7-9

In the Linear Growing Patterns breakout session, participants will build on their learning from the plenary session in a math talk learning community that will grow as the week progresses. Participants will look at Big Ideas through a linear growing pattern lens, discuss student stumbling blocks, and create open and parallel questions. Participants will also explore how using manipulatives and technology in tune with questioning techniques is an effective strategy for helping students overcome their stumbling blocks.

Presenters:



Judy Dussiaume



Wendy Telford

Focused Conversations with Critical Friends

Facilitators



Donna Delre



Mary Lou Kestell



Linda Lofaro



Irene McEvoy



Judy Mendaglio

Focused Conversations with Critical Friends

Through 'Focused Conversations with Critical Friends', participants will identify an area of inquiry focused on deepening their understanding in: Questioning to Differentiate Instruction, the Big Ideas, Important Mathematics, or Anticipating Student Struggles.

Using coaching and facilitation strategies, group members will collaboratively develop a personalized product to address their inquiry focus.

Facilitators



Kaye Appleby



Tom Chapman

Focused Breakout Session Biographies

Judy Dussiaume is a curriculum coordinator in the Rainbow DSB. From 2006-08, she worked as an Education Officer for the Ministry of Education as part of the CLIPS development team. Judy has played a leadership role in the development of TIPS, Think Literacy: Mathematics Subject-Specific Examples Grades 7-9, CLIPS, and numerous resources developed with The Geometer's Sketchpad software. As a member of the expert panel on mathematical literacy, she participated in the development of the report Leading Math Success. Judy has a keen interest in the use of manipulatives and technology in mathematics education, particularly in building a variety of representations and using these to help students and teachers see connections among mathematical concepts and within our world.

Wendy Telford teaches secondary mathematics in the Peel District School Board. Most recently, she worked in the Math GAINS project as a Provincial Mathematics Coach focusing on schools in Toronto, Peel and Timmins. Wendy also mentors many teachers in Peel's Side by Side mentoring program and teacher candidates through various faculties of education. She develops lessons and assessments for use in the Peel District School Board, and has written support materials targeting differentiated instruction strategies for McGraw-Hill Ryerson teacher's resource manuals. Her classrooms are known for their welcoming atmosphere and serve as a safe space in which students learn and grow, both mathematically and as people.

Focused Breakout Sessions

Linear Relations, Grades 8-10

Participants will experience hands-on activities to connect the grade 8, 9, 10 Linear Relationships to the Big Ideas of Patterning to Algebraic Reasoning. Discussion will centre on the effective use of questioning and differentiated instruction in developing a lesson. Participants will explore specific activities from TIPS4RM, CLIPS, Gizmos, GSP, graphing calculators, CBR and various manipulatives

Presenters:



Greg Clarke



Trish Steele

Focused Breakout Session Biographies

Shirley Dalrymple is a mathematics department head with York Region District School Board, with seventeen years of experience in the classroom and a two-year secondment to the Ministry of Education. Shirley has taken a leadership role in numerous provincial projects including the steering committee for the Field's Mathematics Education Forum, and CLIPS, TIPS4RM MDM4U, TIPS4RM, and TIPS development. Shirley served as an OAME board member for many years and is a past president of OAME.

Connie Quadrini is the Grades 7-12 Mathematics Consultant for the York Catholic District School. During 2008-09, she served as the Coaching for Math GAINS steering team lead for the Toronto and Thunder Bay regions. Connie is currently a director for OAME and was co-chair of the OAME 2008 annual conference. She has been involved in several Ministry initiatives including Math CAMPPP 2008 & 2009, GAINS 07-08 & 08-09, and the Mathematical Processes, and has presented at numerous provincial level symposiums and conferences.



Focused Breakout Sessions

Trigonometric Functions, Grades 11-12

This session will provide participants with the opportunity to deepen their understanding from the plenary session through the lens of trigonometric functions. Participants will explore and make sense of the big ideas of trigonometric functions through discussion, open and parallel questions, and a study of CLIPS (Periodic & Sine Functions & Their Transformations). In addition, participants will consider the role of effective uses of manipulatives and technology, including interactive whiteboard technology, graphing calculators and CBR's, the mathematical processes, math talk learning communities and assessment for/as/of learning.

Presenters:



Shirley Dalrymple



Connie Quadrini



Focused Breakout Session Biographies

Greg Clarke is currently on assignment with the Ministry of Education with the Grades 7-12 Math Team, working on the CLIPS and Math GAINS projects. Prior to this, he was working as the Secondary Programme Coordinator for the Simcoe Muskoka Catholic DSB. He has been involved in a number of provincial math projects, including TIPS, PRISM-NEO and a number of Geometer's Sketchpad symposiums.

During the 2005-2006 school year, Greg had the privilege of working with a great team of educators as part of the K-6 Numeracy Team, preparing modules to be posted on the eworkshop.on.ca website.

Since 2007, he has been fortunate to be working with another great group of educators, the 7-12 Math Team, and is looking forward to more of the same in this coming year.

Trish Steele is the K-12 Numeracy Consultant for Simcoe County District School Board. This past year she was a regional lead for Ottawa and London in the GAINS Coaching initiative. She is the integer storyboard lead for CLIPS, and has been active in previous Ministry projects including TIPS4RM, Mathematical Processes and fractions CLIPS.

Focused Breakout Sessions

Quadratic Functions, Grades 10-11

By doing and discussing mathematics, CAMPPers will deepen their understanding of the big ideas of Quadratic relations and the manner in which they may effectively link their instruction to these big ideas. After identifying common student stumbling blocks, we will strategize ideas and tools informed by experience and research for addressing these situations. Activity and discussion topics include: the effective use of manipulatives, open questions, parallel tasks, and ways to connect multiple representations of quadratics.

Presenters:



Crystal Chilvers



Shelley Yearley

Focused Breakout Session Biographies

Crystal Chilvers is currently the mathematics head at Centre Wellington DHS (Fergus) in the Upper Grand District School Board and formerly the computer & technology coordinator. In her 'spare time' she has been a lead writer for some of the OAME support materials (MCF3M and MAP4C), co-presented math PD within the Upper Grand, co-authored chapters for Nelson math textbooks (MPM1D, MPM2D and MHF4U), has just begun work with CLIPS.

Shelley Yearley is a Mathematics Consultant with Trillium Lakelands DSB, and facilitates a variety of professional learning opportunities, including Math CRAFT (TLDSB lesson study), assessment development sessions, data analysis sessions, and demonstration classrooms. Shelley has taken a leadership role in numerous provincial projects, including Steering Team Lead of the 2008-09 Coaching for Math GAINS initiative, co-organizer of Math CAMPPP 2008 and 2009, co-chair of the OAME/OMCA Grade 12 Mathematics Resource Development (2007 - 2008), and TIPS, LMS and TIPS4RM development.